AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-8. (Canceled)

9. (Currently Amended) A heat-sealing device which moves a tube-shaped packaging material, formed from a packaging material web and filled up with liquid food under a liquid surface of the liquid food, through operation of a seal jaw and a counter jaw, and transversely heat-seals the tube in a seal zone of the tube-shaped packaging material that contains a cutting predetermined zone through softening or melting of plastic material forming the packaging material, the seal jaw and the counter jaw both including an operation surface that ~~is adapted to face~~ faces and contacts the seal zone during transverse sealing under the liquid surface of the liquid food, the operation surface of the seal jaw being a flat surface, and including removal/mixture means on the operation surface of the counter jaw for removing from the seal zone seal prevention impurity including the liquid food which may remain in the seal zone, and/or mixing the seal prevention impurity with the plastic material that has softened or melted.

10. (Previously Presented) The heat-sealing device of Claim 9, wherein the removal/mixture means is a sloped surface forming the operation surface of the counter jaw.

11. (Previously Presented) The heat-sealing device of Claim 10, wherein the sloped surface is a chevron-shaped surface.

12. (Previously Presented) The heat-sealing device of Claim 9, wherein the removal/mixture means is a ridge continuously or discontinuously formed at the operation surface of the counter jaw.

13. (Previously Presented) The heat-sealing device of Claim 9, including an inductor for high frequency induction heating that is arranged at the seal jaw, and the packaging material comprises a metal thin layer and a thermoplastic material innermost layer.

14. (Previously Presented) The heat-sealing device of Claim 9, including a horn for forming the seal zone by ultrasonic heating that is arranged at the seal jaw, and the packaging material includes at least a thermoplastic material innermost layer.

15. (Previously Presented) The heat-sealing device of Claim 9, including a resistance body for forming the seal zone by heating that is arranged at the seal jaw, and the packaging material includes at least a thermoplastic material innermost layer.

16. (Currently Amended) A heat-sealing device which transversely seals a tube-shaped packaging material filled up with liquid food under a liquid surface of the liquid food to form a seal zone of the tube-shaped packaging material through softening or melting of plastic material forming a part of the tube-shaped packaging material, comprising a seal jaw and a counter jaw positioned in opposition to one another, the seal jaw including means for effecting softening or melting of the plastic material forming a part of the tube-shaped packaging material, the seal jaw and the counter jaw both including an operation surface that ~~is adapted to face~~ faces and contacts the seal zone during transverse sealing under the liquid surface of the liquid food, the operation surface of the seal jaw being a flat surface, the operation surface of the counter jaw being formed with one of: at least one raised ridge; at least one chevron-shaped element; or a sloping surface, to remove seal prevention impurity including the liquid food which may remain in the seal zone, and/or to mix the seal prevention impurity with the softened or melted plastic material.

17. (Previously Presented) The heat-sealing device of Claim 16, wherein the operation surface of the counter jaw is formed as a sloped surface.

18. (Previously Presented) The heat-sealing device of Claim 16, wherein the operation surface of the counter jaw is formed with a ridge.

19. (Previously Presented) The heat-sealing device of Claim 16, wherein the means for effecting softening or melting of the plastic material forming a part of the tube-shaped packaging material includes an inductor for high frequency induction heating.

20. (Previously Presented) The heat-sealing device of Claim 16, wherein the means for effecting softening or melting of the plastic material forming a part of the tube-shaped packaging material includes a horn for forming the seal zone by ultrasonic heating.

21. (Previously Presented) The heat-sealing device of Claim 16, wherein the means for effecting softening or melting of the plastic material forming a part of the tube-shaped packaging material includes a resistance body for forming the seal zone by heating.

22. (Currently Amended) A filling machine for advancing a packaging material web, forming the web into a tube-shaped packaging material, filling up liquid food in the tube-shaped packaging material, and transversely heat-sealing the tube-shaped packaging material in a seal zone of the packaging material containing a cutting predetermined zone through softening or melting of plastic material forming the packaging material, comprising a heat-sealing device for forming the seal zone, the heat-sealing device comprising a seal jaw and a counter jaw that both include an operation surface ~~adapted to face~~ facing and contacting the seal zone during transverse sealing under the liquid surface of the liquid food, the operation surface of the seal jaw being a flat surface, and including removal/mixture means on the operation surface of the counter jaw for removing from the seal zone seal prevention impurity which may remain in the seal zone, and/or mixing the seal prevention impurity including the liquid food with the plastic material that has softened or melted.

23. (Previously Presented) The filling machine of Claim 22, wherein the removal/mixture means is a sloped surface forming the operation surface of the counter jaw.

24. (Previously Presented) The filling machine of Claim 23, wherein the sloped surface is a chevron-shaped surface forming the operation surface of the counter jaw.

25. (Previously Presented) The filling machine of Claim 22, wherein the removal/mixture means is a ridge continuously or discontinuously formed at the operation surface of the counter jaw.

26. (Previously Presented) The filling machine of Claim 22, including an inductor for high frequency induction heating that is arranged at the seal jaw, and the packaging material comprises a metal thin layer and a thermoplastic material innermost layer.

27. (Previously Presented) The filling machine of Claim 22, wherein a horn for forming the seal zone by ultrasonic heating that is arranged at the seal jaw, and the packaging material includes at least a thermoplastic material innermost layer.

28. (Previously Presented) The filling machine of Claim 22, including a resistance body for forming the seal zone by heating that is arranged at the seal jaw, and the packaging material includes at least a thermoplastic material innermost layer.